Sangyoon Lee

List of Publications by Year
in descending order

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112 papers	2,759 citations	236925 25 h-index	189892 50 g-index
113 all docs	113 docs citations	113 times ranked	4135 citing authors

#	Article	IF	Citations
1	Mechanically Durable and Highly Stretchable Transistors Employing Carbon Nanotube Semiconductor and Electrodes. Advanced Materials, 2016, 28, 4441-4448.	21.0	234
2	Liquid-Crystalline Semiconducting Copolymers with Intramolecular Donorâ"Acceptor Building Blocks for High-Stability Polymer Transistors. Journal of the American Chemical Society, 2009, 131, 6124-6132.	13.7	225
3	Full Color Tunable Photonic Crystal from Crystalline Colloidal Arrays with an Engineered Photonic Stopâ€Band. Advanced Materials, 2012, 24, 6438-6444.	21.0	147
4	Space-coiling metamaterials with double negativity and conical dispersion. Scientific Reports, 2013, 3, 1614.	3.3	146
5	Loss-compensated and active hyperbolic metamaterials. Optics Express, 2011, 19, 25242.	3.4	126
6	An Alternative Host Material for Longâ€Lifespan Blue Organic Lightâ€Emitting Diodes Using Thermally Activated Delayed Fluorescence. Advanced Science, 2017, 4, 1600502.	11.2	103
7	Organic-on-silicon complementary metalâ€“oxideâ€“semiconductor colour image sensors. Scientific Reports, 2015, 5, 7708.	3.3	94
8	Spin-Coated CdS Thin Films for n-Channel Thin Film Transistors. Chemistry of Materials, 2009, 21, 604-611.	6.7	93
9	Green-Sensitive Organic Photodetectors with High Sensitivity and Spectral Selectivity Using Subphthalocyanine Derivatives. ACS Applied Materials & Interfaces, 2013, 5, 13089-13095.	8.0	85
10	A Highly Sensitive Capacitive Touch Sensor Integrated on a Thin-Film-Encapsulated Active-Matrix OLED for Ultrathin Displays. IEEE Transactions on Electron Devices, 2011, 58, 3609-3615.	3.0	71
11	Fabrication and Evaluation of Solution-Processed Reduced Graphene Oxide Electrodes for p- and n-Channel Bottom-Contact Organic Thin-Film Transistors. ACS Nano, 2010, 4, 6343-6352.	14.6	69
12	Role of incorporated hydrogen on performance and photo-bias instability of indium gallium zinc oxide thin film transistors. Journal Physics D: Applied Physics, 2013, 46, 055104.	2.8	67
13	Low dark current small molecule organic photodetectors with selective response to green light. Applied Physics Letters, 2013, 103, 043305.	3.3	60
14	Narrow-Band Organic Photodiodes for High-Resolution Imaging. ACS Applied Materials & Interfaces, 2016, 8, 26143-26151.	8.0	59
15	Influence of Illumination on the Negative-Bias Stability of Transparent Hafniumâ€“Indiumâ€“Zinc Oxide Thin-Film Transistors. IEEE Electron Device Letters, 2010, 31, 440-442.	3.9	53
16	Improvement in the device performance of tin-doped indium oxide transistor by oxygen high pressure annealing at 150â€‰Â°C. Applied Physics Letters, 2012, 100, .	3.3	50
17	Thin Films of Highly Planar Semiconductor Polymers Exhibiting Band-like Transport at Room Temperature. Journal of the American Chemical Society, 2015, 137, 7990-7993.	13.7	48
18	Dynamic Characterization of Green-Sensitive Organic Photodetectors Using Nonfullerene Small Molecules: Frequency Response Based on the Molecular Structure. Journal of Physical Chemistry C, 2014, 118, 13424-13431.	3.1	42

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19	A high performance green-sensitive organic photodiode comprising a bulk heterojunction of dimethyl-quinacridone and dicyanovinyl terthiophene. Journal of Materials Chemistry C, 2013, 1, 2666.	5.5	40
20	Dipolar donorâ€“acceptor molecules in the cyanine limit for high efficiency green-light-selective organic photodiodes. Journal of Materials Chemistry C, 2016, 4, 1117-1125.	5.5	40
21	Thin-film encapsulation of top-emission organic light-emitting devices with polyurea/Al2O3 hybrid multi-layers. Organic Electronics, 2009, 10, 1352-1355.	2.6	39
22	Mechanically and optically reliable folding structure with a hyperelastic material for seamless foldable displays. Applied Physics Letters, 2011, 98, .	3.3	38
23	Magnetic Field Effect in Organic Lightâ€Emitting Diodes Based on Electron Donorâ€“Acceptor Exciplex Chromophores Doped with Fluorescent Emitters. Advanced Functional Materials, 2016, 26, 6930-6937.	14.9	37
24	Electrically tunable photonic crystals from long-range ordered crystalline arrays composed of copolymer colloids. Journal of Materials Chemistry C, 2013, 1, 5791.	5.5	35
25	Structural Color Manipulation Using Tunable Photonic Crystals with Enhanced Switching Reliability. Advanced Optical Materials, 2014, 2, 535-541.	7.3	35
26	Mechanical design of RiceWrist-S: A forearm-wrist exoskeleton for stroke and spinal cord injury rehabilitation. , 2012, , .		30
27	Microscopic Origin of Universal Quasilinear Band Structures of Transparent Conducting Oxides. Physical Review Letters, 2012, 108, 196404.	7.8	24
28	Enhanced electrical stability of organic thin-film transistors with polymer semiconductor-insulator blended active layers. Applied Physics Letters, 2012, 100, 083302.	3.3	24
29	Development of a biomimetic quadruped robot. Journal of Bionic Engineering, 2007, 4, 193-199.	5.0	23
30	Atomicâ€layerâ€deposited ZnO thinâ€film transistors with various gate dielectrics. Physica Status Solidi (A) Applications and Materials Science, 2012, 209, 2087-2090.	1.8	23
31	Improvement of photo-induced negative bias stability of oxide thin film transistors by reducing the density of sub-gap states related to oxygen vacancies. Applied Physics Letters, 2013, 102, .	3.3	23
32	18.4: A New Seamless Foldable OLED Display Composed of Multi Display Panels. Digest of Technical Papers SID International Symposium, 2010, 41, 257-260.	0.3	22
33	The Effect of Active-Layer Thickness and Back-Channel Conductivity on the Subthreshold Transfer Characteristics of Hfâ€“Inâ€“Znâ€“O TFTs. IEEE Electron Device Letters, 2011, 32, 1077-1079.	3.9	22
34	Molecular Weightâ€Induced Structural Transition of Liquidâ€Crystalline Polymer Semiconductor for Highâ€Stability Organic Transistor. Advanced Functional Materials, 2011, 21, 4442-4447.	14.9	21
35	Low dark current inverted organic photodetectors employing MoO x :Al cathode interlayer. Organic Electronics, 2015, 24, 176-181.	2.6	21
36	Stability enhancement of an electrically tunable colloidal photonic crystal using modified electrodes with a large electrochemical potential window. Applied Physics Letters, 2014, 104, .	3.3	20

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37	Robust multiperiod inventory model considering trade-in program and refurbishment service: Implications to emerging markets. Transportation Research, Part E: Logistics and Transportation Review, 2020, 138, 101932.	7.4	20
38	High Performance Organic Thin-Film Transistor based on Amorphous A,B-Alternating Poly(arylenevinylene) Copolymers. Macromolecules, 2010, 43, 6045-6049.	4.8	19
39	Microfluidic Arrays for Rapid Characterization of Organic Thinâ€Film Transistor Performance. Advanced Materials, 2011, 23, 1257-1261.	21.0	18
40	Efficient closed-form solution of inverse kinematics for a specific six-DOF arm. International Journal of Control, Automation and Systems, 2012, 10, 567-573.	2.7	18
41	Photoexcited charge collection spectroscopy of two-dimensional polaronic states in polymer thin-film transistors. Physical Review B, 2012, 85, .	3.2	15
42	Organic Photodiode with High Infrared Light Sensitivity Based on Tin Phthalocyanine/C$_{60}$ Bulk Heterojunction and Optical Interference Effect. Japanese Journal of Applied Physics, 2012, 51, 034103.	1.5	15
43	Piezoelectrically Actuated Biomimetic Self-Contained Quadruped Bounding Robot. Journal of Bionic Engineering, 2009, 6, 29-36.	5.0	14
44	Flexible nano-hybrid inverter based on inkjet-printed organic and 2D multilayer MoS 2 thin film transistor. Organic Electronics, 2014, 15, 3038-3042.	2.6	13
45	Fabrication of Comb-Structured Acceleration Sensors by Roll-to-Roll Gravure Printing. International Journal of Precision Engineering and Manufacturing - Green Technology, 2022, 9, 409-420.	4.9	13
46	Ionic self-assembled monolayer for low contact resistance in inkjet-printed coplanar structure organic thin-film transistors. Organic Electronics, 2014, 15, 2021-2026.	2.6	12
47	Defect-related photoluminescence properties of as-synthesized and annealed NiO nanostructures via hydrothermal method. Thin Solid Films, 2016, 598, 33-38.	1.8	12
48	Fabrication and Characterization of Roll-to-Roll Printed Air-Gap Touch Sensors. Polymers, 2019, 11, 245.	4.5	12
49	Fabrication and Characterization of Roll-to-Roll-Coated Cantilever-Structured Touch Sensors. ACS Applied Materials & Interfaces, 2020, 12, 46797-46803.	8.0	12
50	An effective light-extracting microstructure for a single-sheet backlight unit for liquid crystal display. Journal of Micromechanics and Microengineering, 2012, 22, 095006.	2.6	11
51	Statistical analysis on the effect of calendering process parameters on the geometry and conductivity of printed patterns. Robotics and Computer-Integrated Manufacturing, 2013, 29, 424-430.	9.9	11
52	Energy Gap between Photoluminescence and Electroluminescence as Recombination Indicator in Organic Small-Molecule Photodiodes. Journal of Physical Chemistry C, 2016, 120, 10176-10184.	3.1	11
53	Water-head pumps provide precise and fast microfluidic pumping and switching versus syringe pumps. Microfluidics and Nanofluidics, 2016, 20, 1.	2.2	11
54	Steering guide-based lateral control for roll-to-roll printed electronics. Journal of Mechanical Science and Technology, 2010, 24, 319-322.	1.5	10

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55	Design of an shape memory alloy-actuated biomimetic mobile robot with the jumping gait. International Journal of Control, Automation and Systems, 2013, 11, 991-1000.	2.7	10
56	Arrayed beam steering device for advanced 3D displays. Proceedings of SPIE, 2013, , .	0.8	10
57	Bi-layered metal-oxide thin films processed at low-temperature for the encapsulation of highly stable organic photo-diode. Organic Electronics, 2017, 41, 259-265.	2.6	10
58	Resonance Properties of 3C-SiC Nanoelectromechanical Resonator in Room-Temperature Magnetomotive Transduction. IEEE Electron Device Letters, 2009, 30, 1042-1044.	3.9	9
59	Improvement of the Performance of Printed Organic Thin Film Transistor by Calendering Process. Science of Advanced Materials, 2016, 8, 363-368.	0.7	9
60	Homogeneous Al2O3 multilayer structures with reinforced mechanical stability for high-performance and high-throughput thin-film encapsulation. Scripta Materialia, 2010, 62, 447-450.	5.2	8
61	Characterization of bias stress induced electrical instability in liquid-crystalline semiconducting polymer thin-film transistors. Journal of Applied Physics, 2011, 110, .	2.5	8
62	A novel design of a robot that can jump and roll with a single actuator. , 2012, , .		8
63	A fast mesoscale quadruped robot using piezocomposite actuators. Robotica, 2013, 31, 89-98.	1.9	8
64	Cantilever Type Acceleration Sensors Made by Roll-to-Roll Slot-Die Coating. Sensors, 2020, 20, 3748.	3.8	8
65	Nonlinear characteristics in radio frequency nanoelectromechanical resonators. New Journal of Physics, 2010, 12, 043023.	2.9	7
66	Color filters for reflective display with wide viewing angle and high reflectivity based on metal dielectric multilayer. Applied Physics Letters, 2012, 101, .	3.3	7
67	Optimization of calendering process using Taguchi method to improve the performance of printed capacitor. Japanese Journal of Applied Physics, 2014, 53, 05HC06.	1.5	7
68	Lateral control system for roll-to-roll fabrication process of organic photovoltaic. Japanese Journal of Applied Physics, 2014, 53, 05HC09.	1.5	7
69	Passivity Based Backstepping Control for Trajectory Tracking Using a Hydraulic Transformer. , 2015, , .		7
70	Enhancement of the electrical performance of a printed organic thin film transistor through optimization of calendering process. Organic Electronics, 2018, 54, 126-132.	2.6	7
71	High-Performance and Stable Transparent Hfâ€“Inâ€“Znâ€“O Thin-Film Transistors With a Double-Etch-Stopper Layer. IEEE Electron Device Letters, 2010, , .	3.9	6
72	43.2: Mutual Capacitance Touch Screen Integrated into Thin Film Encapsulated Active-Matrix OLED. Digest of Technical Papers SID International Symposium, 2011, 42, 621-624.	0.3	6

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73	Application of a fuzzy controller for the lateral control in roll-to-roll printed electronics. International Journal of Precision Engineering and Manufacturing, 2012, 13, 1525-1532.	2.2	6
74	Enhanced Performance of Thiophene-Rich Heteroacene, Dibenzothiopheno [6,5-b:6â€™,5â€™-f] Thieno[3,2-b]Thiophene Thin-Film Transistor With MoO_xHole Injection Layers. IEEE Electron Device Letters, 2017, 38, 649-652.	3.9	6
75	Fabrication of a printed capacitive air-gap touch sensor. Japanese Journal of Applied Physics, 2018, 57, 05GC04.	1.5	6
76	Design and experiments of an upper-limb exoskeleton robot. , 2017, , .		5
77	Preparation of Cu nanoparticles with controlled particle size and distribution via reaction temperature and sonication. Surface and Interface Analysis, 2017, 49, 405-409.	1.8	5
78	Using an Optimized Calendering Process with a Grey-Based Taguchi Method to Enhance the Performance of a Printed OTFT. Science of Advanced Materials, 2017, 10, 501-506.	0.7	5
79	Application of calendering for improving the electrical characteristics of a printed top-gate, bottom-contact organic thin film transistors. Japanese Journal of Applied Physics, 2018, 57, 05GC01.	1.5	5
80	Design of general-purpose assistive exoskeleton robot controller for upper limbs. Journal of Mechanical Science and Technology, 2019, 33, 3509-3519.	1.5	5
81	Lateral Position Control of a Moving Web in Roll-to-Roll Processes. , 2008, , .		4
82	A Shape Memory Alloy-Actuated Bio-Inspired Mesoscale Jumping Robot. International Journal of Advanced Robotic Systems, 2012, 9, 91.	2.1	4
83	Development of a Minimally Actuated Jumping-Rolling Robot. International Journal of Advanced Robotic Systems, 2015, 12, 45.	2.1	4
84	Electrically Driven Diffraction Grating Designed for Visible-Wavelength Region. IEEE Electron Device Letters, 2013, 34, 84-86.	3.9	3
85	A small and fast piezo-actuated legged robot. , 2007, , .		2
86	Improving the performance of hand posture classification by perimeter sensor with sEMG. , 2013, , .		2
87	Force Analysis and Modelling of Soft Actuators for Catheter Robots. , 2016, , .		2
88	Multi Degree-of-Freedom Hydraulic Human Power Amplifier With Rendering of Assistive Dynamics. , 2016, , .		2
89	Dually crosslinkable SiO2@polysiloxane coreâ€“shell nanoparticles for flexible gate dielectric insulators. RSC Advances, 2017, 7, 17841-17847.	3.6	2
90	Supervisory Control for a Switched Mode Hydraulic Transformer. , 2018, , .		2

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91	Fuzzy control of the lateral position of a moving web in roll-to-roll processes. , 2009, , .		1
92	Development of a mesoscale self-contained bounding robot. , 2009, , .		1
93	Fuzzy control of the lateral position of web using a steering guide. , 2010, , .		1
94	Design and implementation of an SMA-actuated jumping robot. , 2010, , .		1
95	Design of an SMA-actuated jumping robot. , 2010, , .		1
96	Design and simulation of a robot that can walk and jump. , 2011, , .		1
97	Organic TFTs: Microfluidic Arrays for Rapid Characterization of Organic Thin-Film Transistor Performance (Adv. Mater. 10/2011). Advanced Materials, 2011, 23, 1172-1172.	21.0	1
98	Classification of hand grasp using perimeter change of the forearm. , 2012, , .		1
99	Simulation and experiments of a four-legged robot that can locomote by crawling and jumping. , 2014, , .		1
100	Classification of hand postures using forearm perimeter sensor and compensation of residual muscle volume change with sEMG. International Journal of Mechatronics and Automation, 2014, 4, 213.	0.2	1
101	Passive Control of a Hydraulic Human Power Amplifier Using a Hydraulic Transformer. , 2015, , .		1
102	Two types of quadruped robots: Bounding and walking. , 2007, , .		0
103	Two Types of Biologically-Inspired Mesoscale Quadruped Robots. , 2008, , .		0
104	Improvement of surface roughness and conductivity by calendering process for printed electronics. , 2011, , .		0
105	High-performance photorefractive polymer composites based on poly(9-vinyl-3-carbazolcarboxyaldehyde diphenylhydrazone). Macromolecular Research, 2012, 20, 1118-1120.	2.4	0
106	Experimental demonstration of acoustic and electromagnetic metamaterials with conical dispersion. , 2013, , .		0
107	Simulation and analysis on dynamics of a minimally-actuated hybrid mobile robot. , 2013, , .		0
108	Robust classification of hand posture to arm posture change using inertial measurement units. , 2014, , .		0

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109	Analysis and Simulation of a Jumping Robot Actuated by Shape Memory Alloy. Advances in Intelligent Systems and Computing, 2016, , 1315-1326.	0.6	0
110	Gain-Assisted Hyperbolic Metamaterials. , 2012, , .		0
111	Design and Simulation of a Jumping Robot Driven by Shape Memory Alloy and Elastic Energy. Advanced Science Letters, 2012, 8, 302-306.	0.2	0
112	Enhancement of Lateral Control via Vision System for Printed Electronics. Advanced Science Letters, 2012, 8, 153-157.	0.2	0